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FIG. 1. SEIP MOUND IN THE FOREGROUND, PRICER MOUND IN THE REAR TO THE LEFT.

Certain Mounds and Village Sites in Ohio



VOL. 2. PART 1

Explorations of the Seip Mound

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Anthropology

EXPLORATIONS OF THE SEIP MOUND.

WILLIAM C. MILLS.

The Seip Mound is located within the largest prehistoric earthworks of the Paint Creek Valley known as the Seip Group.¹

One very large mound and another half its size enclosed with earthworks, which form a combination of two circles and a square, and five mounds situated outside the earthworks, but in close proximity to them, constitute the Seip Group. This group is located in Paxton Township, Ross County, about 3 miles east of Bainbridge, a village situated in the extreme western portion of the county. The mounds can readily be reached by conveyance, as the old Milford and Chillicothe Pike passes in sight of the Works and the Detroit Southern Railway has a flag station only a quarter of a mile away.

Paint Creek Valley has long been known for its beautiful scenery and productive soil and is drained by Paint Creek, a stream of irregular turbulence, crossing from one side of the valley to the other until it finally empties into the Scioto River south of Chillicothe. The mounds and earthworks comprising this group occupy the greater portion of the rich agricultural bottom land in the great bend formed by Paint Creek as it changes its course from the north side of the valley directly to the south side, where it follows the base of the foothills for some distance.

At the present time one can readily trace the circles, but the square with its various openings cannot be so readily traced. Yet, when the site is freshly plowed, the old walls are easily traced by a slight elevation and the change in the appearance of the soil. The mounds, which are all quite large, have deteriorated less than the earthworks, but the farm cultivation of the few outside the walls has greatly reduced them in height. The two mounds within the walls have suffered little by the encroachment of agriculture. The largest of the two mounds is known

¹ Described by Squier and Davis in "Ancient Monuments of the Mississippi Valley", pp. 4 and 58.

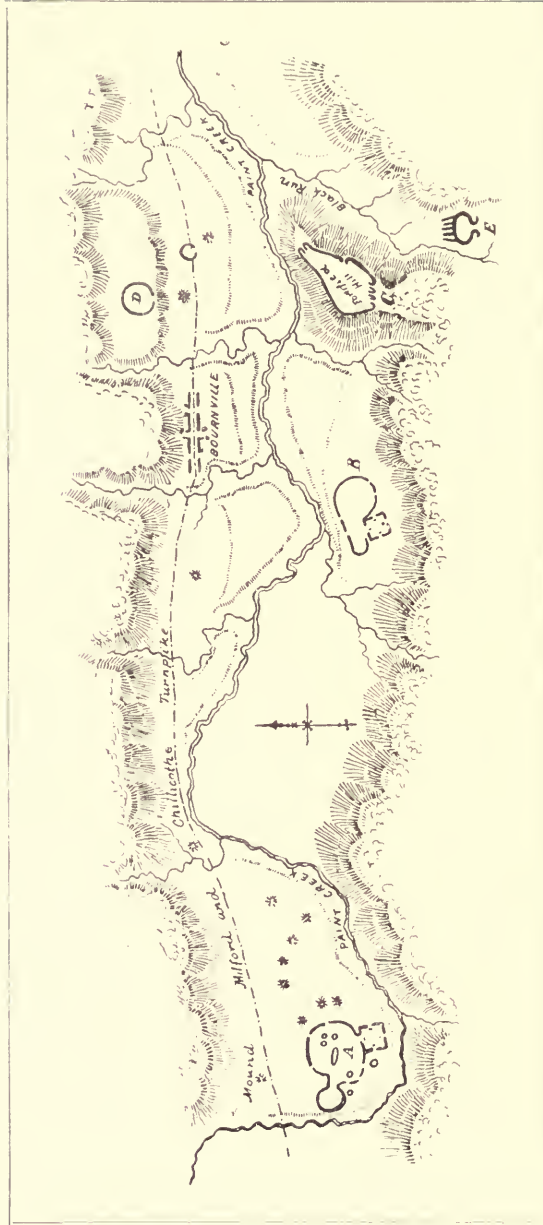


Fig. 2. Six miles of the Paint Creek Valley (Squier & Davis). (A) Seip Group of mounds and earthworks, (B) Baum Group of Mounds and earthworks, (C) Spruce Hill.

as the Pricer Mound, and at the present time a number of large native trees are growing upon its top and sides. It is about 25 feet high and 240 feet long. The mound has been fenced about, and the enclosure is now used as a sheep pasture, consequently, the surface of the mound is devoid of the usual growth of weeds and bramble, so common to the large mounds in Ohio.

The Seip group has long been known to the early archaeological writers and explorers. Mr. Caleb Atwater gave a description of the Works in the first volume of the American Antiquarian Society, 1820, and in 1833 the same writer again described the works in his "Description of Western Antiquities" and from this book the description was widely copied by other writers on American Antiquities and I quote what Mr. Atwater has written about the Seip Group:

"Works at A. are all connected as represented in the plate. Their several contents will be seen by referring to it. The square work, it will be seen, contains exactly the same area with the square one belonging to B, and is, in all other respects, so much like that work, that to describe this, would be to repeat what has been said concerning the former. Such coincidences are very common in our ancient works; so that a correct description of one applies to hundreds in different parts of the country.

"There is no mound within its walls, but there is one about ten feet high, nearly one hundred rods to the west of it. The large irregular part of the larger work, contains, as will be seen, seventy-seven acres and one-tenth, in the walls of which are eight gateways, besides the two leading into the square just described. These gateways are from one to six rods in width, differing in that respect, very much, one from another.

"Connected by a gateway with this large work, is another in the Northwest, sixty poles in diameter. In its center is another circle, whose walls are now about four feet high, and this lesser circle six rods in diameter. There are three ancient wells at w, w, w, one of which is on the inside, the others on the outside of the wall. As the drawing shows, within the large work of irregular form, are two elevations, which are elliptical. The largest one is near the center; its elevation is twenty-five feet; its longest diameter is twenty rods; its shortest, ten rods; its area is nearly one hundred and fifty-nine square rods. This work is composed mostly of stones, in their natural state. They must have been brought from the bed of the creek, or from the hill. This elevated work is full of human bones. Some have not hesitated to express a belief, that on this work human beings were once sacrificed.

"The other elliptical work has two stages; one end of it is only about eight feet high, the other end is fifteen. The surfaces of both are

smooth. Such works are not as common here as on the Mississippi, and they are more common still further south, in Mexico.

"There is a work in form of a half moon, set around the edges with stones, such as are now found about one mile from the spot from whence they were probably brought. Near the semicircular work is a very singular mound, five feet high, thirty feet in diameter, and composed entirely of a red ochre, which answers very well as paint. An abundance of this ochre is found on a hill not a great distance from this place; and from this circumstance, the name of the fine stream in the vicinity, an all probability, is derived. It is called "Paint Creek."

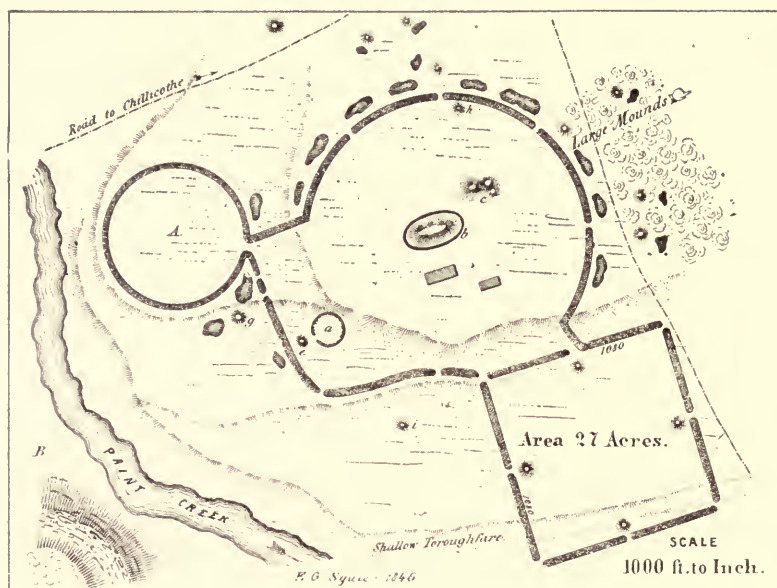


Fig. 3. The Seip Group after Squier & Davis.

Mr. Josiah Priest, an early writer on American Antiquities, 1833, quotes at some length from Atwater, but unfortunately places the ochre mound in another group.

Squier and Davis also describe and illustrate this group, with a drawing, in "Ancient Monuments of the Mississippi Valley," page 58, and I quote from them and reproduce their drawing, which is shown in Fig. 3.

"Within the larger circle, and not far from its center, is a large elliptical mound, two hundred and forty feet long by one hundred and



Fig. 4. Photograph showing the gravel of large size, $2\frac{1}{2}$ feet in thickness. The flat stones cover the edge of the mound.

sixty broad, and thirty in height. It is considerably larger than any other single mound in the valley, and covers a little more than two-thirds of an acre. It seems to be composed, at least towards the surface, of stones and pebbles,—a feature peculiar to a certain class of mounds, of a highly interesting character. It is surrounded by a low, indistinct embankment, the space between which and the mound seems to have raised by the wasting of the latter. Perhaps this was a low terrace. To the right of this fine mound is a group of three others in combination, as shown in the plan at c. There are several other small mounds in and around the work. Several very large and beautiful ones, composed entirely of clay, occur about one-fourth of a mile distant, in the direction indicated in the plan.

"The entire work is surrounded by deep pits or excavations, usually called 'wells,' from which the materials for the mounds and embankments were procured. So numerous are these, and such serious obstacles are the mounds and embankments to cultivation, that a deduction of several acres is allowed to the tenant in consequence, by the lease of the estate upon which they occur.

"The small circle at a is two hundred and fifty feet in diameter. It has been so much reduced by the plough as to be traced with difficulty.²

"Although the square enclosure connected with this work is situated on the second terrace, a portion of it, at periods of great freshets, is invaded by the water, which passes through a shallow thoroughfare indicated on the map. This singular circumstance is easily accounted for. The creek in its course strikes the base of a high hill at B, composed of shale, which readily undermines occasioning great slips or slides. These fill the channel of the creek, damming it up and forcing it out of its usual course. It was probably at the period of one of these slides, that the creek, in its reaction on the opposite shore broke through the embankment and formed the thoroughfare, or dry channel, above mentioned. The remark, therefore, that the earthworks of the West never occur upon the first, or latest-formed terrace, and are always above high-water mark, is not at all invalidated by this circumstance."

THE SEIP MOUND.

The Seip Mound, named in honor of the Seip brothers, the present owners of the land, is about half the size of the Pricer Mound and is located upon the same terrace, only a short distance to the east of the larger mound. (See Frontispiece).

² Mr. Atwater (*Archæologia Americana*, Vol. 1, page 143), describes the small mound at e, as composed "entirely of red ocher, which answers very well as a paint." Its present composition is a clayey loam. It has been examined and found to contain an altar.



Fig. 5. At work in the third section of the mound, height 30 feet.

Squier and Davis, in their drawing of this group, note the Scip Mound as three distinct mounds, as shown in Fig. 3. I have classed the group as one mound though made up of three separate but connected mounds, as our explorations afterward revealed. This feature is invariably present in all large mounds of this culture.

The measurements of the various sections of the combined mound differ greatly. Commencing at the west end of the mound, which was the largest, the height from outside measurements was 18 feet, but as the explorations progressed, the mound was found to be 20 feet and 1 inch high, making the base 2 feet and 1 inch lower than appeared from the general level of the surrounding surface. The diameter of this section north and south was 120 feet. The second section, closely connected with the adjoining one on the east, was 11 feet 10 inches high with a diameter north and south of 70 feet. The third section was not on a line east and west with the other two sections but was placed to the south, as shown by Fig. 3, and clearly connected with section 2. It was 6 feet high with a diameter of 40 feet.

SPECIAL FEATURES OF THE EXTERIOR OF THE MOUND.

The mound for the most part was composed of loam or surface soil, secured upon all sides of the mound and in close proximity to it. The top of the first section, or larger mound, was composed of clay and limestone gravel. This combination, in the course of time, became cemented together and proved quite a problem in its removal, as almost every portion had to be picked loose before a shovel could be used. Another feature of the mound was discovered shortly after work was begun on the north side by finding, near the base of the mound, several flat stones, averaging 10 by 14 inches, so placed as to resemble steps, and a further examination revealed a series of flat stones, 18 to 20 inches under the surface, extending from the base toward the top of the mound. The steps were, no doubt, used to aid in reaching the summit of the mound with the heavy loads of earth, in the effort of the builders to complete the monument.



Fig. 6. Large cist containing four burials (cremated).

Another external feature frequently met with in the mounds of this culture is the use of gravel in construction, but in this mound, gravel of large size, with the appearance of having been screened, was placed entirely around the base of the mound, to a depth of two feet, in many places the depth reaching $2\frac{1}{2}$ feet. The width varied from 7 feet to 5 feet, and at times was a great hindrance to the workmen, as this gravel had to be removed, in order to expose the base of the mound, and at times could not be shoveled but had to be removed by hand.

Only one large "Pin Oak" tree was left standing upon the mound by the owners, and this was variously* estimated, before removal by us, to be from 100 to 175 years old, but when cut and the rings of growth counted, it was found that the tree probably did not exist when the mound was first noted by Atwater in his *Archaeologia Americana*, 1820.

SPECIAL FEATURES OF THE INTERIOR OF THE MOUND.

Many very interesting features, as compared with other mounds of this culture, were brought to light in the examination of the Scip Mound.

First: The site of the mound exhibits three separate inclosures, circular in form, as evidenced by the post molds, extending into the base of the mound. The post molds had charred wood at the top of the mold, indicating that the posts at one time extended above the surface, and no doubt formed the sides of the building, or charnel house.

Second: The object of the mound was a monument to the dead, placed over the site of the charnel house. The burials were similar in many respects to those of the Harness Mound,³ but differing in many instances as to the number of cremated dead, placed in a prepared burial cist. All the burials placed in the charnel house were cremated and graves prepared for the reception of the charred bones and ashes of the dead.

Third: The burials in the mound were of two kinds: cremated and uncremated. The cremated were all placed upon the

* 3 Explored in 1903, and described in "Certain Mounds and Village Sites in Ohio", Vol. 1, by William C. Mills.

floor of the charnel house, while the uncremated were promiscuously placed in various portions of the mound above the base line, only one having a prepared grave for the reception of the body.

Fourth: The builders of the Seip Mound were similar in character to those of the Harness Mound, and represented the highest culture of prehistoric man in Ohio.

The special features enumerated above, can be better un-



Fig. 7. Large cist containing two burials cremated and places left for more.

derstood by a further discussion, and I shall attempt in the following pages, to give a detailed account of the examination of each section of the mound.

THE MOUND SITE.

The Seip Mound is located practically in the center of a large circular earthwork which, for the most part, occupies the third terrace of the Paint Creek Valley; the surface of this portion of the terrace is quite level, but this particular spot selected



Fig. 8. Floor of burial shrine covered with mica.

by the builders was somewhat lower than the surrounding surface. Perhaps the surface soil, which had been removed almost to the gravel, had been used in the construction of the large Pricer Mound, which is only a few hundred yards away. After selecting the site, the building was constructed by placing large posts in the ground to a depth of an average of $2\frac{1}{2}$ feet. These were so placed as to form a circular building, 60 feet in diameter east and west, and 72 feet in diameter north and south. The posts, forming the outside of the building were placed upright in the earth, and would average $2\frac{1}{2}$ feet apart. Two entrances to the building were found: one to the northwest, and one to the east. The entrance to the northwest was of peculiar construction, and made by the walls overlapping each other, forming a passageway, or hall, about 3 feet in width, and 7 feet in length. The passageway was covered with fine sand varying in thickness from two inches to one-half inch, and so firmly packed as to have the appearance of coarse sand-stone.

The floor of this section of the mound was very irregular, as shown by the examination. On the south side but little fill was required to make the floor level. As the north side of the floor of the charnel house was approached, it was found that 17 inches of a fill was required to make the floor level. This fill was made with logs, brush, gravel and clay. The logs and brush were piled in the lowest places, and covered with clay and gravel. In the course of time the logs would decay, but the imprint, or mold would remain. Very frequently the molds would connect with the large upright post molds, extending deep into the base. At first glance, one might infer the builders had some design other than building up the floor to a common level, but a careful examination revealed nothing beyond the use of logs as a filler in building the base or floor to a uniform level.

The entrance to the charnel house from the east was a short passageway from the second circular charnel house. The passageway was only about 3 feet in width and $2\frac{1}{2}$ feet in length; the floor was also covered with fine sand.

The second section was also a circular charnel house measuring 43 feet east and west, and 32 feet north and south. The floor of this section did not require very much, if any, filling to

make it level. The outside posts formed the sides of the building, and were quite large on the north side, while those used for the other portions were similar in size to the first section.

The openings in this section were two; one leading into the first section, as described, and the second leading into the third section, with practically no passageway; as the third section was built to the southeast of the second section. The third section was oblong; the longest diameter, which was north and south,



Fig. 9. Slabs of slate upon which was placed a body at full length.

being $22\frac{1}{2}$ feet, and the shortest diameter east and west, 15 feet. The floor of the third section was also prepared and leveled, the same as the other two sections. The posts used in the construction of the sides of this section were all smaller than those used in the other sections.

THE OBJECT OF THE MOUND.

The object of the mound was a monument to the dead, erected over the site of the various charnel houses described



Fig. 10. Large copper plate with scroll cut upon the side.

above. Before the monument was erected, the superstructure was destroyed by fire, as evidenced by the charred remains of the posts forming the outside walls, as well as the posts promiscuously distributed throughout the interior of the structure, which perhaps, supported the roof. For the most part, the upright posts were burned off at the base line, but now and then a large post would not all be consumed, and a portion of the charred remains would extend, in many instances, several feet above the base, and was preserved, while the portions of the posts extending into the ground were entirely decayed, and only the post mold remained. Very frequently, the post molds would show a perfect imprint of the bark, while in others knots, or any imperfection in the log, would be shown. In several instances large quantities of bog iron had formed in the mold.

CREMATED BURIALS.

All the burials placed in the charnel house were cremated, and I shall describe each section, as they differed somewhat from each other.

In the first section, which was the first charnel house erected, and the largest of the group, many of the prepared graves were so constructed that one or more burials could be placed in the same burial cist. This was done by preparing a large platform of prepared clay (Fig. 6) usually 6 to 7 feet in length, and 4 feet wide, and building up the sides and ends with round logs, varying in diameter from 5 to 3 inches, to the height of 18 or 20 inches. A cover was placed over the top, which was made up, usually of split pieces, instead of round pieces, used for the sides and ends. Clay was then placed around the sides and ends to firmly hold the logs in place.

Four burials, as shown in Fig. 6, made the largest number found in a grave, but 2 or 3 burials were met with quite frequently. A cist with two burials, both placed on one side of the grave is shown in Fig. 7. The large graves were placed near the center of the charnel house, and large passageways, often 6 to 7 feet in width would intervene. Near the large graves a cluster of small post molds, varying in number from 5 to 7 would be found. These posts were usually placed about

Fig. 11. Large copper plate with both ends ornamented.



one foot apart, but not in any particular form. Frequently the floor around the posts would be covered with great quantities of charred cloth, ornaments, and implements, and occasionally the floor would be covered with mica, as shown in Fig. 8. The mica was usually placed so as to cover the floor completely, and only the natural mica crystals, split in many pieces, were used. It seems very probable that the cluster of posts near the graves were the sacred shrines for the dead, and here the clothing, and very frequently, some of the most interesting ornaments, such as cut and polished human jaws, large effigy eagle claws, bear teeth set with pearls, pendants of ocean shells, and shell and bone beads in great numbers, and in a few instances, copper ornaments were found with the charred woven fabrics, so promiscuously placed upon the floor surrounding the posts. At one of the shrines a quantity of charred rope almost 4 feet in length, and a number of effigy eagle claws made of bone, were found. The rope was 3-ply, and made of coarse bast fibre, perhaps that of Bass-wood.

The graves placed near the outside walls were all smaller than those placed in the center of the charnel house, and contained only the remains of one individual, and in this respect, were similar to the burials in the Edwin Harness Mound.⁴

All the burials in this section of the mound, which numbered 24, were cremated at the large crematory located just inside the northeast entrance. The crematory, when uncovered, was perfectly devoid of ashes or human remains and measured 6 feet by 8 feet, the longer diameter being east and west.

All the graves, both large and small, in this section, were of the plain elevated platform kind, so common in the Edwin Harness Mound. The platform type was made of clay, and invariably elevated from 6 to 10 inches above the floor of the charnel house. The platform was usually higher in the center, gradually sloping to the sides and ends, where logs averaging about 6 inches in diameter had been placed, usually in the form of a parallelogram. The clay used in the construction of the grave

⁴The Edwin Harness Mound is located eight miles south of Chillicothe, along the Scioto. Explored 1903, and described in *The Society's Publications* — Vol. 16, by William C. Mills.

Fig. 12. Large copper plate covered with shell beads.



had the appearance of having been puddled before being used, and in many instances, after the coating of puddled clay had been placed over the grave, a fire was built and the clay burned to a light red. The ashes and any charcoal that might remain were removed before the incinerated remains were placed in the grave.

As stated, the single graves in the first section were similar in construction to those of the Harness Mound, though the final burial ceremony must have been different. In the Harness Mound, after the incinerated remains had been placed in the grave, objects of clothing, together with straw, bark, or twigs were placed over the remains and set on fire; while burning, clay was covered over the grave, thus preserving the cloth, the grass, and twigs in a charred state. This ceremony was dispensed with in this section of the Seip Mound, and the incinerated remains were placed in the prepared grave, and a covering of wood, usually split pieces, was placed over the top and the grave covered with earth to a depth of a few inches.

For the most part, adults were buried in this section. However, in the grave containing 4 burials, one was an adolescent, and in another, a very small child was placed by the side of an adult.

All the burials in this section were rich in copper implements and ornaments, placed in the graves.

The graves in the second section were similar in construction to those of the first section, all being of the platform type, though they varied greatly in size from the ordinary single grave to a very large size, 12 feet 2 inches long by 4 feet 5 inches wide. These larger graves contained the remains of two individuals, so placed as to occupy the ends of the grave, the intervening space not being used, due perhaps to the fact that this section together with the third section (which did not contain a single burial) was abandoned before the house was filled. The burials in the second section were placed around the side walls, and the center was devoid of graves.

The final ceremony of burning straw, bark, and clothing over the remains, similar to the burial methods at the Harness Mound, was in evidence in 9 burials of the 19 found on the base of the

Fig. 13. Copper plate made of two separate pieces of copper and attached by overlapping edges.



section, and only one of the 19 was cremated in the grave where the remains were found.

The floor of the third section of the charnel house was entirely devoid of burials, and at only one point, which was near the west side, did the floor show any signs of having a fire built upon it: here the earth was burned to a deep red, perhaps a body had been cremated there, and the remains deposited in one of the other sections.

Perhaps no definite reason can be given for erecting a monument over an unoccupied site, but the most plausible rea-



Fig. 11. Copper ear ornaments made of two concavo-convex plates.

son therefor, taking into consideration the second section, which was only partially filled, is that the site was abandoned, the charnel houses burned, and the mound finally erected over all as a monument to the dead.

UNCREMATED BURIALS.

The five uncremated burials found in the various sections of the mound were promiscuously placed at various heights from the base line, only one having anything like a prepared grave for the reception of the body. The grave was placed 3 feet above the floor of the charnel house in section number 2.

The bottom of the grave was formed of large slabs of slate, and the body was laid at full length upon the slabs and covered with soil. Fig. 9 shows the slabs after the skeleton had been removed.

One burial was found in the third section, $2\frac{1}{2}$ feet above the floor. No grave was prepared, and the body was doubled up and laid on the mound, and covered with earth, similar to the burial in section two. The two burials evidently were those of individuals who died during the building of the mound, as their implements of copper and ornaments of shell were identical with



Fig. 15. Copper car ornaments made of five separate pieces of copper.

those found in the graves of the cremated dead, placed upon the floor of the charnel house.

The other three burials were found in section one. One burial, that of an adolescent, was placed 7 feet above the floor, and was buried similar to the one in section three, with no apparent grave prepared for the body. The ornaments of bear teeth set with pearls, and a large string of ocean shell beads, were similar to those found with the cremated dead placed upon the floor. The remains of the other two burials of this section were placed together in a double grave, 10 feet above the floor.



Fig. 16. Copper crescent attached to a large copper plate by corrosion.

The grave was evidently dug into the side of the mound, as the outlines of the grave were very noticeable. The remains, when placed in the grave, were perhaps, devoid of flesh, and had been carried from some distant part of the country, or had been temporarily buried in some convenient place where the bones could be collected and afterward placed in the mound. The various parts of the skeletons were promiscuously placed in the grave; the skulls were placed upside down and only a few inches apart, the lower jaws detached were placed in another part of the grave; the arm and leg bones were placed side and side; several bones of the hand and feet were entirely missing.



Fig. 17. Copper hemisphere used for making ornamental balls.

One large copper plate, 10 inches in length and 5 inches in width, and a fine copper axe, 4 inches in length and 2 inches in width, together with large strings of ocean shell beads, were found near the bottom of the grave. The implements and ornaments were similar in every respect to those found upon the floor of the charnel house.

My conclusions are, concerning the uncremated dead promiscuously placed above the floor of the charnel house, that they belonged to the same culture represented by the cremated dead placed upon the floor of the charnel house; that three of the individuals died during the time required for the erection of the mound, to whom the custom of cremation was dispensed with; that the two dismembered individuals placed in one grave were disinterred, and the remains brought to the mound and buried with the dead belonging to the same culture. •

THE ARTIFACTS FOUND WITH THE BURIALS.

The artifacts taken from the burials of the mound, as a whole, were very interesting, although in the second and third sections but few implements and ornaments had been placed in the graves, but in the first section, almost every burial was prolific in implements and ornaments of copper, mica, shell, and stone.

From the 48 burials contained in the three sections of the



Fig. 18. Copper awls.

mound, were secured upwards of 2,000 specimens, representing the highest art of prehistoric man in Ohio.

The material from which the implements and ornaments were made, came from widely separated regions. The copper used in making the implements and ornaments, no doubt came from Lake Superior region. The ocean shells used in making drinking cups, pendants, and beads, perhaps came from the Gulf, and the mica, which was so universally used for ornament, came from North Carolina.

The finding of so much material, so remote from the source of supply, indicates that the prehistory inhabitants of this section had an intertribal trade, for it seems impossible that the Ohio tribes visited the widely separated points, whence came the articles noted.

ORNAMENTS OF COPPER.

The best preserved specimens found in the graves were the implements and ornaments made of copper, and perhaps next to the ear ornaments, the most interesting of the copper ornaments are the large copper plates, of which sixteen were found in the various sections of the mound. The plates were made of one piece of native copper, hammered to about one-eighth of an inch in thickness, while a few were found that would approach one-sixteenth of an inch in thickness. The plates varied in size from $10\frac{1}{2}$ inches in length, by $5\frac{1}{2}$ inches in width, to $3\frac{1}{4}$ inches in length, by $2\frac{1}{2}$ inches in width. The plates were made in the general form of a parallelogram, with the ends cut concave, and the sides straight, one plate had a large scroll cut on one side, as shown in Fig. 10, and one plate had both ends cut into ornamental forms, as shown in Fig. 11. The large plate, size $10\frac{1}{2}$ inches long by $5\frac{1}{2}$ inches wide, and covered with cylindrical beads made of ocean shell, is shown in Fig. 12. This plate, together with three more, almost equal in size, and the two ornamented plates described above, were all taken from the same grave. On account of the special features of this burial cist, I will quote from my field notes:

Grave number 19, which was placed within six feet of number 18, and directly north of it, was the largest and finest so far



Fig. 19. Large copper axe, length $6\frac{1}{2}$ inches, width at bit 4 inches.

discovered in this mound. The cist was made by preparing a platform of clay, the highest point of which was 10 inches above the floor of the charnel house, and 4 inches above the first logs



Fig. 20. Large copper axe, length $5\frac{1}{2}$ inches.

laid around this platform to form the walls of cist. The side walls of the cist were 18 inches high, and made in the form of a parallelogram, 7 feet 3 inches in length, and 4 feet in width.

The molds of the lower logs were fully 7 inches in diameter, while the upper logs varied from 5 to 3 inches in diameter. The usual split pieces, as indicated by the molds, were placed over the top. The clay forming the top of the platform had been burned. Upon this platform were placed two burials, one at the south end, which was burial number 21, and one to the east side.



Fig. 21. Copper axes, one showing a portion of the corroded copper removed and the other shows the incinerated bones adhering to the surface.

which was burial number 22. They were so placed that further burials could be placed in the cist.

Burial number 21, which occupied a portion of the south end of the cist, was an adult, and from the general appearance of the incinerated bones, was no doubt, a male. Before the incinerated bones had been placed in the grave, a tanned skin of some animal was placed at the bottom of the cist; upon the skin

was placed a large copper axe, $6\frac{1}{2}$ inches long, 4 inches wide at the bit, and 3 inches wide at the pole. The axe was also wrapped in leather, which was preserved by the salts of copper. The incinerated remains were placed in a pile over the copper axe, and covered with a coarse matting of bark. Between



Fig. 22. Copper axe showing imprint of cloth.

burials 21 and 22 was placed a large spear point that was very much broken by heat, but it had the appearance of being fully 6 inches in length, if all the pieces could be found, and to that end the entire contents of the grave was placed in boxes.⁵

Practically the same preparation was given burial number 22. The tanned skin was placed on the bottom of the cist, and large copper plates, 6 in number, were placed upon the covered platform. Two of the plates differed greatly from the other four, in being decorated with scrolls and scallops upon the sides and ends. Over the plates a very large string of beads were coiled.

The beads were made of ocean shell, cylindrical in form, and varied in length from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch. The beads were firmly attached to the plate by cor-

⁵ After the contents of the grave were shipped to the Museum and examined, the various pieces of the spear were found and fully restored: length 9 inches, width $3\frac{1}{4}$ inches.

rosion of the copper. On each side of the copper plates was placed a single ear ornament of copper, also seven large pieces of ocean shells, several of them 6 inches in length, and about one inch in width. All shells were perforated with two holes, one at each end for attachment, and so made as not to be visible from the convex side. This was done by boring a small hole at about the middle of the square end to a depth of $\frac{1}{4}$ inch, and connecting



Fig. 23. Bone awls.

this hole with another, bored from the concave side of the shell. Ten or twelve bear teeth, which had been split and polished into thin gorget-like forms and perforated with two holes, were placed around the outside of the copper plates. The cremated remains were then placed over the ornaments and several thicknesses of matting, made of bark, were placed over all.

Between the two burials, but near to number 22, was located an adult human skull with lower jaw. * * * * The



Fig. 24. Bone needles.

plates and other objects found in the grave, could only be superficially examined in the field, and the most interesting points would necessarily be left until the objects were brought to the laboratory.

The plate shown in Fig. 10 is perhaps the heaviest and smoothest of all the plates taken from the mound. The scroll pattern cut upon one side of the plate, represents the first specimen of the kind taken from the mounds of Ohio, as far as known. The

plate was wrapped in leather when it was placed in the grave, and portions still adhere to the plate, as shown in the cut.

The plate in Fig. 11 is perhaps unique. An attempt is made in this plate to decorate the ends of the plate instead of the side. The work of cutting the scrolls is not so perfect and graceful as in the other plate, but is more elaborate. The intervening portion between the scrolls is cut into scalloped forms. The other end of the plate is divided into three scalloped sections, and each section has a repousse decoration at the center. The speci-



Fig. 25. Canine teeth of black bear, unperforated.

men is covered with several layers of cloth, and the repousse decorations do not show so prominent in the Figure.

The plates taken from other graves in the mound were similar in form and size to those contained in the grave described. However, one grave containing two copper plates, a large and a small one, together with 8 other copper ornaments. The large plate presented a new feature in copper plates. The original plate was reinforced by being covered with another plate, a little larger in all of its dimensions. The edges were hammered down over the original plate, in such a manner as to resemble the work of a modern artisan. The plate is shown in Fig. 13.

COPPER EAR ORNAMENTS.

Copper ear ornaments were frequently met with in the graves, and twenty specimens were secured. They were invariably found in pairs. The manufacture of these ornaments required skill, as well as a high degree of advancement in ornamental art. The mode of manufacture of the ear ornaments, although two different types were found, was similar. One type was made of two concavo-convex plates, and were connected by a cylindrical column; but only a few pairs of this type were found. Fig. 14 fully illustrates this type. The other type, which was most common, was made of four plates of copper,



Fig. 26. Canine teeth of bear with counter-sunk holes for attachment.

two of which are circular, and two concavo-convex. The concavo-convex plates are attached to the circular pieces, which form the inside of the ornament. The discs are connected with a small cylinder of copper.⁶ Fig. 15 is a good illustration showing two views of this type of ear ornaments. Other copper ornaments were found sparingly in the burial cists. From one grave a large copper crescent was removed, and from another, six large copper balls.

The crescent is shown in Fig. 16, and was taken from one

⁶ For a complete description of this type of ear ornament, see "Certain Mounds and Village Sites in Ohio," Vol. 1, Section 3.

of the burials. The crescent, as shown in the figure, is attached to a large copper plate by corrosion. The plate is $8\frac{3}{4}$ inches in length and $4\frac{3}{4}$ inches wide and the crescent is $7\frac{1}{2}$ inches in length and two inches in width at the center of the crescent, from which point it gradually tapers to one inch at the ends. The crescent is pierced with two small holes near the convex side at the center.

The plate and crescent as shown in the Figure measures 14 inches in length and the surface of both crescent and plate is



Fig. 27. Canine teeth of bear made into gorgets.

covered with the imprint of a thin, loosely woven fabric. The copper balls were very interesting and show that the ancient artificer displayed skill and patience in forming the malleable copper into the desired form. The balls were made of two separate hemispheres attached by a small cord passing through the small holes bored on each side of the hemispheres. The holes can be seen in the illustration, Fig. 17. The inside of the ball is invariably filled with yellow clay. The hemispheres were no doubt made in molds, and it has often occurred to me that the large stones with the small cup-shaped depressions might have

been used by the ancient artisans in the manufacture of their ornaments. During the explorations several large slabs of sandstone, containing from three to ten depressions, were found in close proximity to the mound, and one of the copper hemispheres fit in one of the depressions in such a way as to lead to the belief that they were used in shaping the copper to his use.



Fig. 28. Bear teeth set with pearls.

IMPLEMENTS OF COPPER.

Only two kinds of copper implements were found in the mound: the awl and the axe. The awls, four in number, varied in length from $7\frac{1}{4}$ inches to 3 inches, and were usually round, tapering to a point at both ends, although one specimen had one end blunt, the body of the awl flat and one end tapering to a point. Fig. 18 shows three of the copper awls. The largest is $7\frac{1}{4}$ inches long and $\frac{3}{8}$ of an inch in diameter at the center, grad-

ually tapering to a point at each end. The second awl shown in the illustration is flat, and is about $\frac{1}{2}$ inch in width and $\frac{1}{4}$ inch in thickness with one end square, with a gradual taper to a sharp point at the other end. The third awl is 4 inches in length and $\frac{1}{4}$ inches in thickness, and this thickness is the same throughout the entire length with only a gradual taper to a point at one end; the other end is blunt. The fourth awl found in the mound was similar to the last one described, but only 3 inches in length.



Fig. 29. Effigy eagle claws.

The copper axes were unusually interesting on account of their variation in size. The largest was $6\frac{1}{2}$ inches long and 4 inches wide at the bit, while the smallest was $2\frac{1}{4}$ inches long and 1 inch wide at the bit. Nine axes were taken from the various sections of the mound, and all were of the plano-convex type, so common in the mounds of this culture. They were made from masses of native copper by hammering into form, and the irregularities of the surface is quite pronounced in many of them. The large axe shown in Fig. 19 is much corroded, and pieces of

leather in which the axe was wrapped still adhere to the surface. The axe is $6\frac{1}{2}$ inches long, 4 inches wide at the bit, and three-quarters of an inch in thickness, and weighs two pounds and eleven ounces. The axe is decidedly of the plano-convex type and shows the great amount of labor necessary to produce such a large and fine axe. Fig. 20 is another copper axe of the same type as the large axe shown in Fig. 19, and measures $5\frac{1}{2}$ inches in length, $2\frac{1}{2}$ inches at the blunt end, 3 inches at the cutting edge, and weighs 1 pound and 12 ounces. The axe is greatly corroded and the surface is partly covered here and there with pieces of



Fig. 30. Alligator
tooth.

leather in which the axe had been wrapped when placed in the burial cist. Fig. 21 shows two very fine axes of the same type but much smaller; both measuring four inches in length and two and one-eighth inches in width at the cutting edge. The first axe (the one to the left) is covered with pieces of calcined human bones, corroded to both faces of the axe. The axe to the right is very interesting, as it shows how it was attached to a handle, even the imprint of the string used in holding the handle in place can be seen; a portion of the corroded copper is removed from the face, showing the convex surface and the very sharp edge as well as the scratches made while sharpening the implement. Fig. 22 is the only axe showing the imprint of a woven fabric, which occurs on the flat side. The convex face

of the axe is perfectly smooth and shows but little corrosion. The other axes (four in number) found in the graves of the mound, ranging in length from 3 inches to $2\frac{1}{4}$ inches, and are flat on one side and convex on the other.

BONE OBJECTS.

Bone implements and ornaments are always associated with prehistory man in Ohio, and the implements of bone and teeth play an important part in the life of the builders of this mound. The bone objects may be grouped under two heads, utilitarian

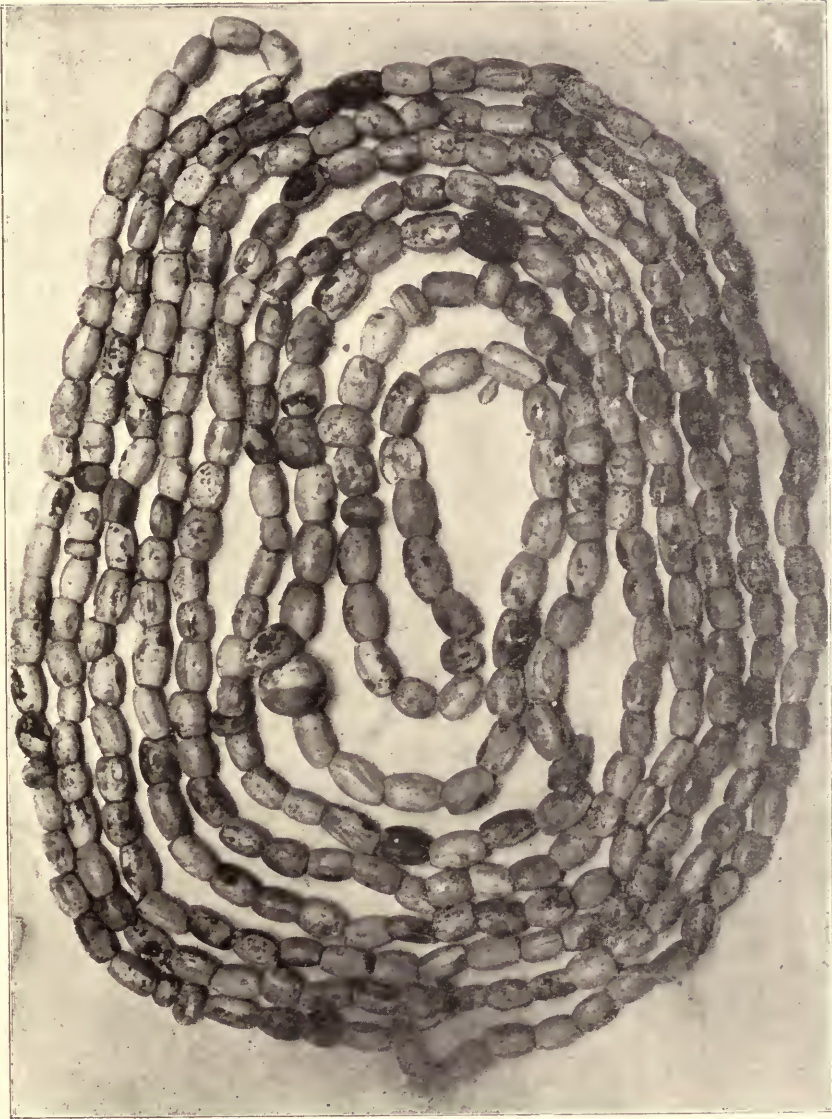


Fig. 31. Shell beads.

and ornamental. Under the utilitarian objects are placed bone digging tools, needles, awls, etc. The bone digging tools were frequently met with outside the graves, and scattered through the soil of the mound. The tools were simply large fragments of the femur bones and shoulder blades of large animals, such as bear, deer, and elk. The bones were used in digging up the soil, preparatory to its use in building up the mound. The tools, naturally, would be carried to the mound, and frequently one would be lost when the load of soil was deposited upon the mound.

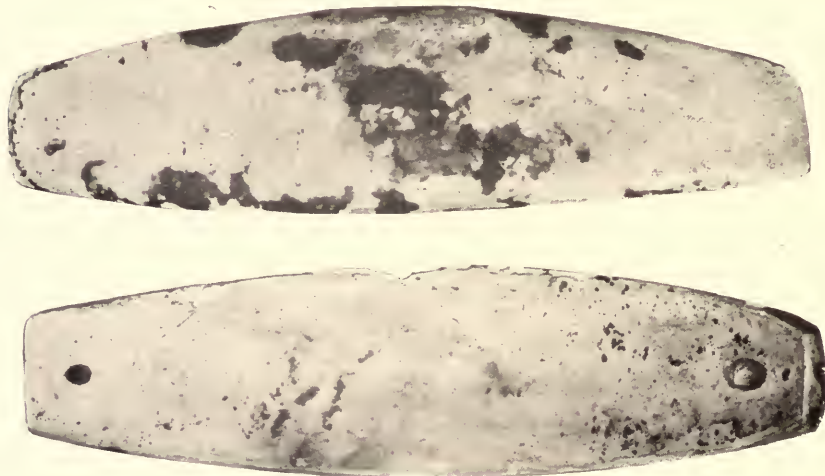


Fig. 32. Large shell ornaments.

BONE AWLS.

Bone awls, or bodkins, were for the most part, destroyed when the body was cremated, as many calcined pieces of implements were found among the cremated remains, but several perfect pieces were found. The awls were invariably made from the tarso-metatarsus of the wild turkey, by cutting away the anterior part of the bone, almost to the center and carrying this cut through to the posterior end of the bone. The awls would vary in length from 3 inches to 4 inches, the points having a gradual taper, and are very sharp. Fig. 23 is a good illustration of the bone awls.



Fig. 33. Large flint spear, length 9 inches, width $3\frac{3}{4}$ inches.

BONE NEEDLES.

Great skill and much labor was required to make the bone needles of the type found in the mound. They were usually made from the strong metapodial bone of the deer. The needles were usually from 3 to 5 inches long, gradually tapering from the head to the point. The head is invariably flat, and pierced with a small hole near the end, as shown in Fig. 24. The hole is bored from both sides. In one of the graves was unearthed a large curved needle 8 inches in length, and made of the rib of some animal. The eye of the needle was placed $\frac{3}{4}$ of an inch from the end, and in many respects, resembles the needles used by the Fort Ancient Culture.⁷

ORNAMENTS OF BONE.

Many ornaments made of bone and teeth were found in perfect condition in the burials of the mound, but many of the most valuable and interesting were destroyed by fire when the body was cremated. The greater number of pendants found in the various burial cists were made of the canine teeth of the black bear which were highly prized for ornament by aboriginal man. Many of the teeth were cut and polished but not perforated for attachment, while others were polished and perforated near the end of the root for attachment, while others were ornamented by a setting of a fine pearl upon the broad face of the root of the tooth, and several were found that had been cut longitudinally near the center of the tooth and the halves hollowed out and so perforated with small holes that the two parts could be attached. A good illustration of the plain polished canine of the bear is shown in Fig. 25. This collection was taken from one of the burials and the teeth were perhaps unfinished, as several of the teeth have holes for attachment drilled about one-third through the tooth. A good illustration of the bear teeth with counter sunk holes for attachment is shown in Fig. 26. This mode of attachment is quite common, but only a

⁷ Exploration of the Baum Village in "Certain Mounds and Village Sites in Ohio, Vol. 1.

few teeth were found in a single grave and these were perhaps attached to a belt instead of being used as pendants.

Figure 27 shows the bear teeth cut lengthwise and each half made into a gorget by drilling two holes near the center. The bear tooth gorgets are highly polished and were perhaps attached to belts or sashes. The bear teeth ornamented by being set with pearls are shown in Fig. 28. The setting of the pearls was very ingenious and shows the resourcefulness of primitive man. It was accomplished by boring a hole in the tooth where the setting was desired, a little larger than the diameter of the



Fig. 34. Gorgets of stone and bone.

pearl to be set. The depth of the hole would vary with the size of the pearl, for in all of the specimens found, the pearls extended above the body and the tooth about $\frac{1}{3}$ of its diameter. The pearl was held in place by a small string passed through a small hole previously drilled through the pearl. The two ends of the string were brought together and passed through a small hole drilled in the bottom of the cavity prepared to receive the setting. The string with the pearl attached was fastened on the back of the tooth, holding the pearl firmly in the cavity. The canine tooth shown to the left in Fig. 28, besides being set with a pearl, is cut into two parts and perforated with holes in order that

the two parts might be fastened together. Invariably one-half of the tooth is hollowed out and the cavity very often filled with a pigment or small piece of quartz or highly colored pieces of flint.

The most interesting of the bone ornaments were those of the effigy eagle claws. They were found in several graves, but the finest specimens were found at one of the burial shrines. The effigy claws were made of the rib bones of the elk, and very often exceeded $4\frac{1}{2}$ inches in length. A representative collection of the effigy claws is shown in Fig. 29. Finding so many effigy claws of the eagle instead of the true claws shows that the eagle was a bird hard to capture or that aboriginal man preferred the effigy claws to the true claws.

Several cut and polished human jaws with the teeth intact were removed from one of the burial shrines, however, this was not an uncommon find in this culture, as many of the mounds examined revealed many specimens showing the use of human jaws for ornament. A large tooth of the alligator was unearthed in one of the graves, and from another grave, four more teeth of the same reptile. The large tooth was two and one-half inches long and almost three-fourths of an inch in diameter. The teeth were all perforated for attachment. As far as records go, this is the first record of finding alligator teeth in the mounds of Ohio. One of the teeth is shown in Fig. 30.

ORNAMENTS OF SHELL.

Ornaments such as pendants and beads were found abundantly, and all were made from ocean shell. From one grave almost 1,000 beads, made of ocean shell, and averaging one-half inch in length, were removed. The beads, when strung, measured more than forty-two feet in length. The beads were made from the heavy parts of large ocean shells, and the greater diameter was at the center, from which they gradually tapered to each end. The beads were pierced with a small hole through their longest diameter. Fig. 31 shows a small string taken from one of the graves. It measures nine feet in length and the beads are colored green by coming in contact with copper ornaments found

associated with them. In one grave was found a large necklace of beads circular in form, about one-half inch in diameter, and resembling small marbles. A good example of this form of beads can be seen near the center of Fig. 31, as this collection contained quite a number of small circular beads and one large one. Another interesting ornament made of shell is shown in Fig. 32. These ornaments were made of strips of ocean shell



Fig. 35. Drinking cup made of ocean shell.

about one inch wide at the center and gradually tapering to about three-fourths of an inch at the end, and varied in length from six inches to four inches. The ends were cut square into which a small hole was bored, about the center of the ornament, to a depth of one-fourth of an inch. A second hole was bored from the concave side to connect with the first hole, thus forming a means of attachment that could not be seen from the convex side. The strips cut from the body of the shell and conform to the gen-

eral curve of the shell. From one burial, a beautiful string of pearls was secured. The pearls were in good state of preservation, and no doubt caused the owner many years of search to secure the number. The flint implements and the various objects made of slate and granite were not abundant in the graves, but a number of excellent examples were secured.

OBJECTS OF FLINT.

Flint Knives — The flint knives flaked from cores of jasper and chalcedony from the Flint Ridge Region were not abundant in the graves, although quite a number were found with the remains, the greater number were found promiscuously throughout the mound, indicating that they were perhaps lost during the construction of the mound. The knives are not large, varying in length from three inches to one and one-half inches. They were made from large cores of banded and variegated Jasper. The convex face of the knife shows several facets, while the concave surface is perfectly plain, running to a sharp edge on each side of the knife. The knives were found abundantly upon the surface in the field surrounding the mound, showing that the implement was much used by the builders of the mound.

Flint Spears — The flint spear shown in Fig. 33 was taken from burial No. nineteen. When found it was broken into many pieces by the action of fire but the pieces were fortunately secured and the specimen fully restored; length nine inches, width three and three-fourths inches. It is impossible to tell the source of the flint from which the spear is made because of the discoloration caused by the fire. Other spear points were found in several of the graves, but all were small compared to the large one described above.

Figure 34 shows two gorgets, one made of dark yellow argillite discolored in several places by coming in contact with copper ornaments. The gorget is two and three-quarter inches long and pierced with a large hole near one end. The other gorget is made from the ventral shell or plastron of the turtle, two and one-eighth inches long and about one inch wide. The specimen is perhaps unfinished.

LARGE SHELLS USED FOR DRINKING CUPS.

From one grave a large container or drinking cup was found. The cup is shown in Fig. 35. It was made from the shell, known as *Fulgur Perversum*, by cutting away a portion of the body



Fig. 36. Simple weaving.

whorl and removing the columella. The beak, as shown in the figure, was carefully rounded and made into a wide spout which would serve as a place to drink from the vessel, or an aid in emptying the vessel after it was filled. The container is seven and one-eighth inches long and 6 inches wide, and the outer sur-

face is highly cut and polished so that the vessel appears perfectly smooth. When placed in the grave the vessel was evidently covered with a delicately woven fabric, as portions of the fabric still adhere to the shell.

TEXTILES.

In a number of graves, of the second section, the final ceremony consisted of setting fire to the covering of straw, twigs, and cloth, and here the charred remnants of cloth and matting



Fig. 37. Reticulate weaving.

were preserved. In the first section, the charred cloth, showing the simplest to the highest art in primitive weaving, was found at the burial shrines outside the graves. The builders of the Seip Mound had learned well the art of textile making, for we know that the true textile art began with the spinning or making of the yarn. This, of course, requires the separation of fibrous tissue from the plant, and twisting the fibers so as to make a strong yarn. The cloth was made from bast fiber, secured from many of the trees and plants known to

exist in prehistory times.⁸ For the most part, the specimens show the simplest form of weaving. (Fig. 36.) This was made by having the warp and woof made of the same kind of thread, usually large and strong, and both were drawn equally tight. However, a very fine reticulated weaving was frequently met with. The warp in this textile was placed about one-eighth

⁸ Specimens of cloth were subjected to Microscopical examination by Prof. J. H. Schaffner, Head of the Dep't of Botany, O. S. U., and he pronounced the cloth made from bast fiber.

of an inch apart and the woof one-sixteenth of an inch and the yarn finely spun. The threads of both the woof and warp equally drawn. A fine illustration of reticulate weaving is shown in Fig. 37.

TANNED SKINS.

Skins made into leather were found in a number of graves. The leather was always associated with copper ornaments and implements and was preserved by the salts of copper. The leather was usually placed upon the platform of the grave and the copper implements, such as axes and ornaments, such as plates were placed upon the leather, which would be preserved insofar as it came in contact with the copper. The leather was very fine and soft, resembling the chamois skins of the present time. A piece of the leather was soaked in water and thoroughly washed to remove as much copper and dirt as possible. The piece was found to be flexible and pliable, and retained some of its original strength. A small piece of the leather showing the shape of one corner of the copper plate that laid over it is shown in Fig. 38.

POTTERY.

Fragments of broken pottery were found in almost every portion of the mound, and in several instances, potsherds of good size, and representing a high type of fictile art, were found in several of the graves, but were not associated with the charred remains. Fig. 39 is a good illustration of the pieces of pottery found.

It seems strange that a people well versed in the fictile art, and able to produce objects in pottery as shown by the discarded sherds; articles requiring great skill and patience to produce the symmetry and grace therein displayed,—that these people would not in some way employ this art facility in their mortuary customs.

OBJECTS OF MICA.

Large blocks of mica were found in many graves, as well as the shrines of the burial cists, where the blocks often completely covered the floor. The detached thin sheets were often cut into geometrical designs and figures, and perhaps served as a decora-

tion, attached to their clothing, as many of the pieces have perforations for that purpose. Several designs are shown in Fig. 40.

RESUME.

A concise account of the examination of the Seip Mound has been given, and a brief mention of the more salient parts

brought out by this examination, might be of interest.



Fig. 38. Leather.

The site of the mound was a charnel house where the dead were brought and prepared for the grave; the preparation consisting of cremating the body and afterwards placing the incinerated remains and ashes in a prepared grave within the charnel house. The site was abandoned before the house was filled; the building destroyed by fire, and a mound erected as a monument to the dead. The charnel house was made up of three distinct sections, and the size of the mound erected over the various sections was per-

haps gauged by the standing or importance of the dead occupants. Over the first section the mound was 20 feet high, and the house contained 24 burials, all of which were more or less rich in copper and other objects. The monument over the second section was 11 feet 10 inches high, and the house contained 19 burials; only a few of which contained objects of copper; other implements and ornaments were very sparingly found,



Fig. 39. Potsherds found in the mound.

while the third section was five feet high, and did not contain a single burial, on the floor of the house. In the first section, graves were enlarged, and very often two, and sometimes three and four burials, together with sufficient space for more, were recorded from a single burial cist, and as not all of the remains were those of adults, this condition would suggest that the large graves containing the remains of more than one person, were those of a family burial cist, the wide floor space between the cists making them readily accessible for burial at any time. The profusion of implements and ornaments made of copper, shell and bone, of a



Fig. 40. Cut mica.

well marked individuality, shows that the builders of the Seip Mound belonged to the highest culture of aboriginal man in Ohio, differing widely in customs and culture from the Peoples inhabiting the Baum Village Site, only a few miles down the valley and practically in sight of the Seip Mound.

The data secured by the opening of this mound, places this group in the Hopewell Culture,⁹ and according to Prof. W. H. Holmes' classification, the North West Group.¹⁰ The builders of

⁹I have, for my own convenience, named the great cultures, whose remains are so abundant in Ohio, Fort Ancient Culture and Hopewell

the mound had an inter-tribal trade, as evidenced by the copper from the Lake Superior Region, the ocean shells and alligator teeth from the far south, and mica from North Carolina. The great variety and quantity of woven fabrics secured, indicate that weaving was assiduously practiced, and formed one of their most important industries. The examination of the mound proves beyond question, that the builders of the mound were pre-Columbian.

Culture; "Explorations of the Baum Village Site," Vol. 14, Ohio State Arch. and Historical Society Publications.

¹⁰ Twentieth Annual Report Bureau of Ethnology.





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